

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-4 are currently being prosecuted. Claims 5-23 remain withdrawn. The Examiner is respectfully requested to reconsider his rejection in view of the amendments and remarks as set forth below.

Information Disclosure Statement

The Examiner stated that the IDS filed on April 12, 2002 was not proper since the authors have been omitted from the listings. Applicants are submitting herewith a new copy of the 1449 form including the authors' names, to obtain the initials of the Examiner. The Examiner notes that the references have been considered.

Rejection under 35 U.S.C. 102

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Brown et al. (WO 96/29621). This rejection is respectfully traversed.

By way of the present Amendment, Applicants have amended claim 1 to now describe the plates as having a periodic structure aligned in a striped form and also that the crystals are rotated 90° with each other. Applicants submit that the Brown et al. reference does not show this arrangement and in particular, does not show the crystal plates having a striped form of a periodic

structure nor the crystals being rotated at 90° with each other. Since these features are not shown in the Brown et al. reference and since these would not be obvious thereover, Applicants submit that claim 1 is allowable thereover.

Rejection under 35 U.S.C. 103(a)

Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown et al. and further in view of Aoki et al. (IEEE paper).

The Examiner points out that the article by the inventor was presented before the priority date of the present application, rendering this as qualified prior art. In answer to this, Applicants are submitting herewith a Declaration Under 37 C.F.R. § 1.131 which points out that the invention was conceived prior to the date of the article and in particular, no later than August 10, 2000. An attached Memorandum with that date discloses substantially all of the features of the present invention. In view of this Declaration, Applicants submit that the Aoki et al. reference is no longer qualified prior art and accordingly, this rejection is overcome.

Conclusion

In view of the above, it is believed that the claims clearly distinguish over the references relied on by the Examiner. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 CFR 1.17 and 1.136(a), Applicants respectfully petitions for a two (2) month extension of time for filing a response in connection with the present application. The required fee of \$420.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: _____

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Attachment:

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Falls Church, Virginia 22040-07047

Declaration Under 37 CFR 1.131
Form PTO-1449

$\lambda = 4\mu\text{m}$ 帯

3D クリスタル

- 1 フットパイル
- 2 ヤブロノイト

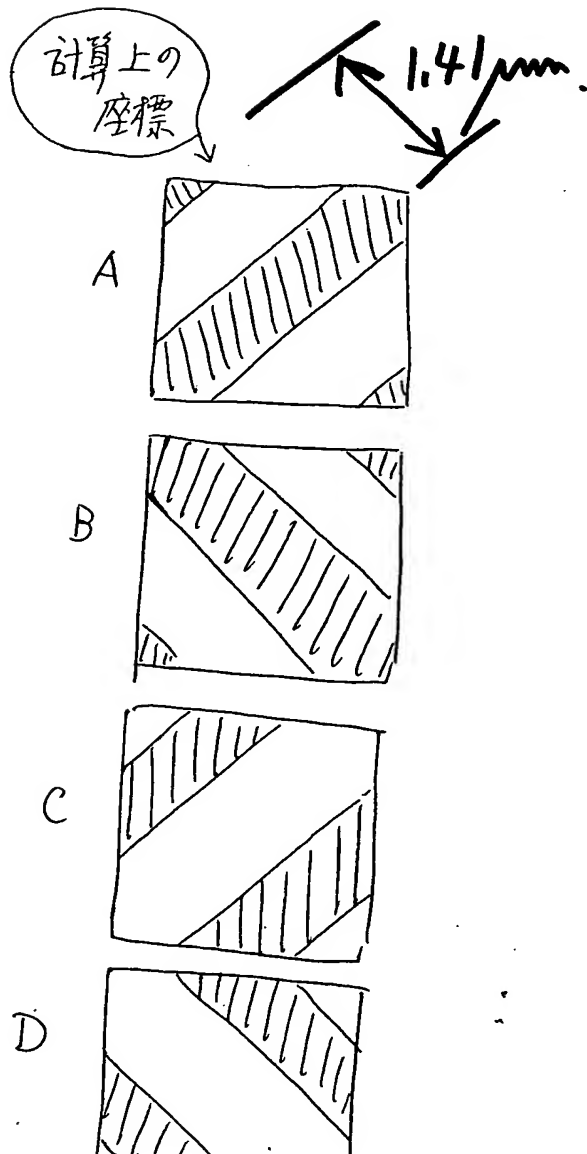
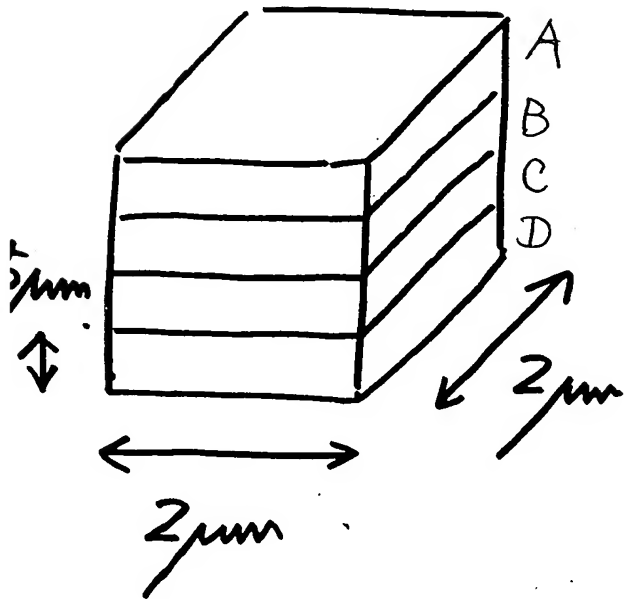
の 作製.

2000. 8. 10

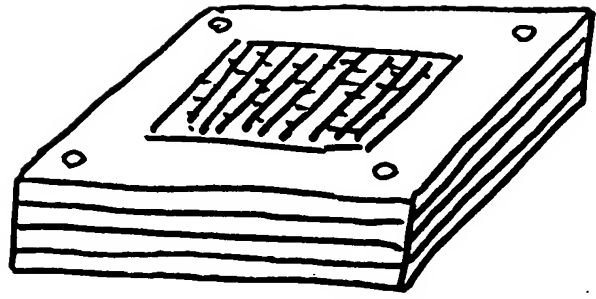
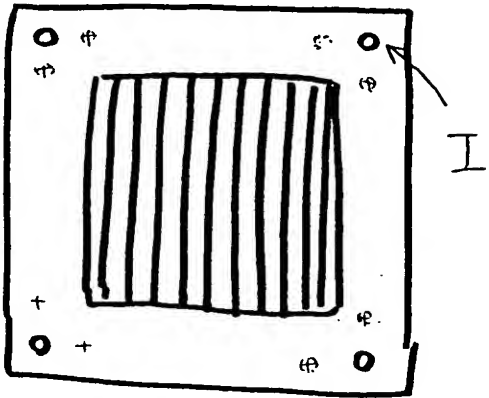
H. Hirayama.

1. フットパイル.

単位格子.

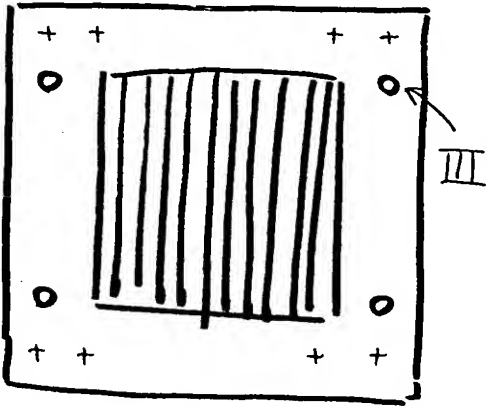
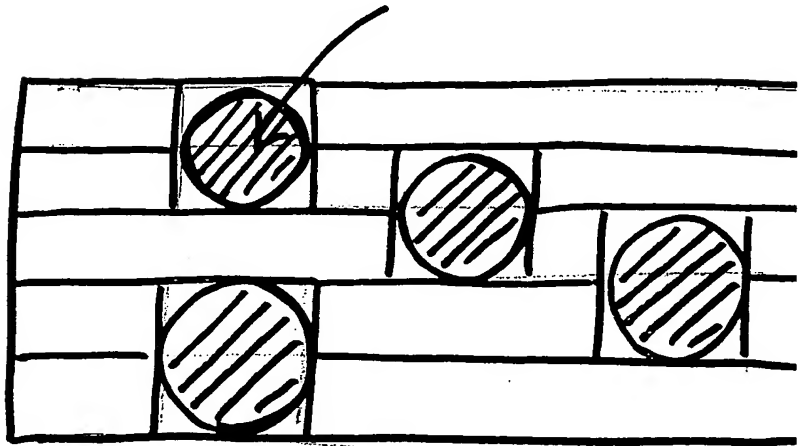
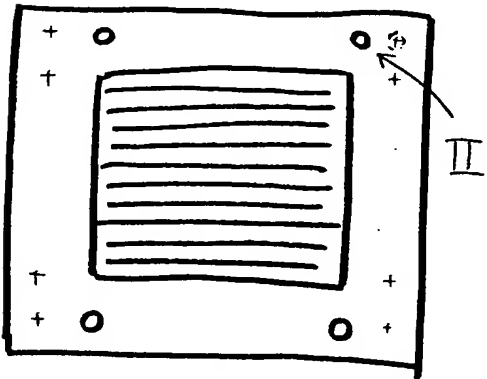


$25\mu\text{m}$



重收方

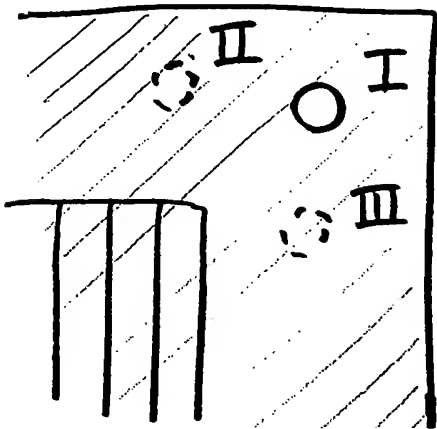
$1\mu\text{m}$ 球

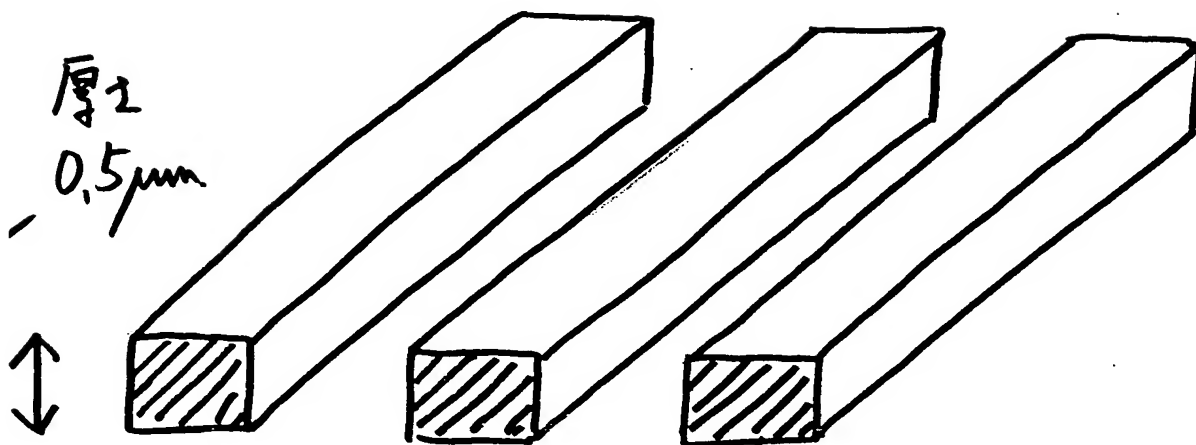
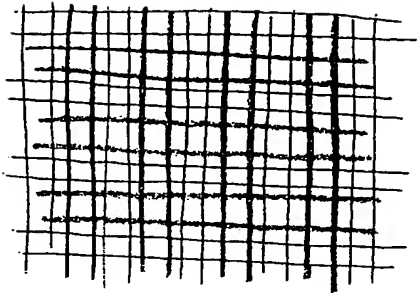


I

II

III





周期
1.4 μm

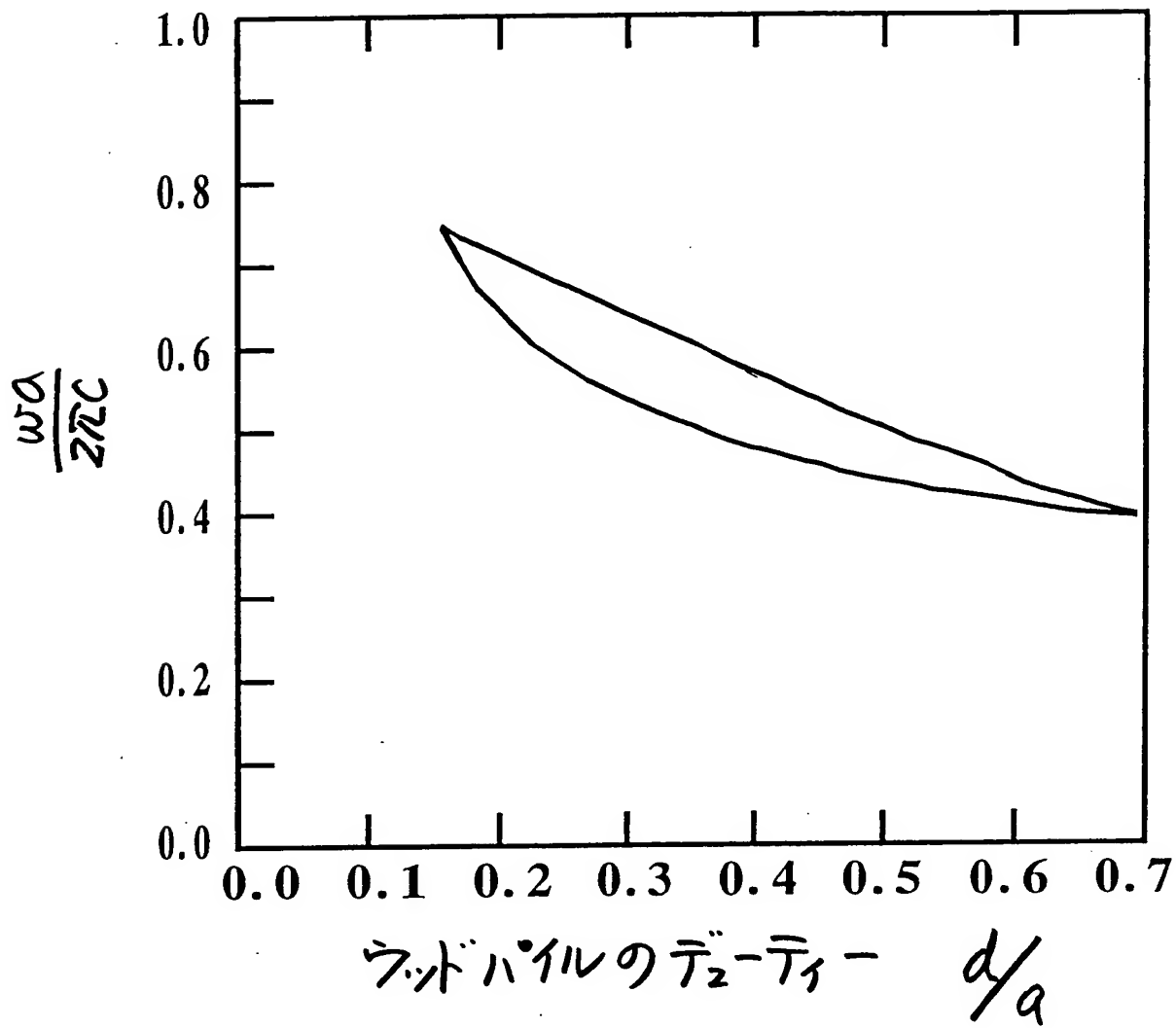
$$\bar{T}_2 - \bar{T}_1 - \frac{d}{a} = 0.2 \sim 0.5$$

$\frac{d}{a} = \underline{\underline{0.3}}$ の時 $\sim 4 \mu\text{m}$ 帯
Band gap

Full sand
(GR)

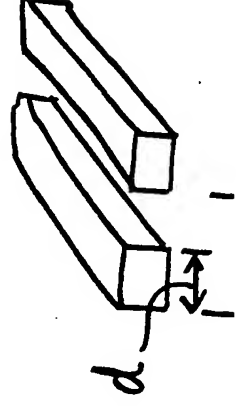
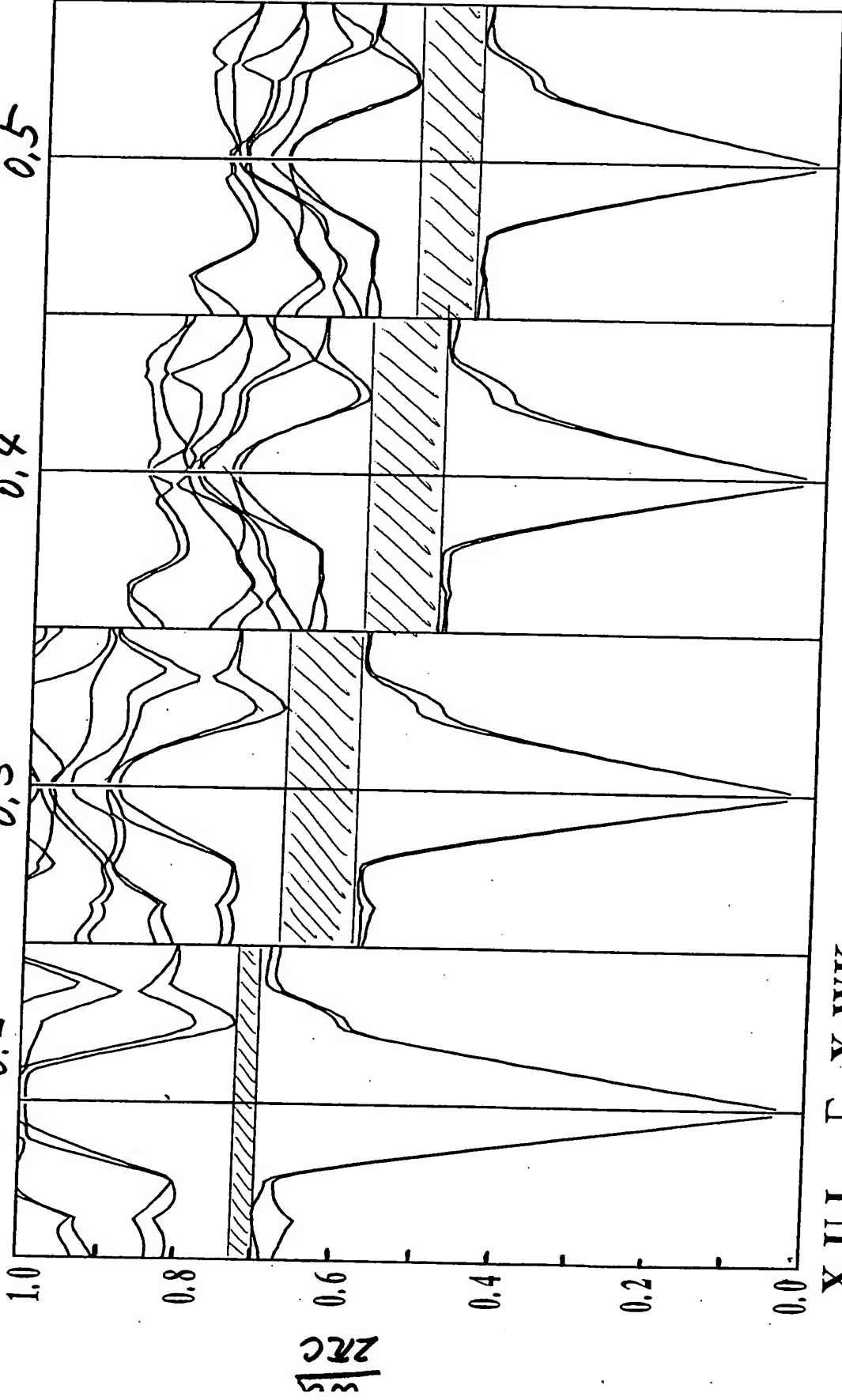
G R 4, F \rightarrow V1 ~ V5, F 逆格子 = 4
(VPP700 2" 200分) 分率) 200

ブッドハイIV (Imp と空弁)
 $n = 3.17$



$R = d/a$ (スプリングの間隔比) $4 \times 31 \sim 34.1$

(IMP) $n=3.17$



ccdec $z'' 7\%$

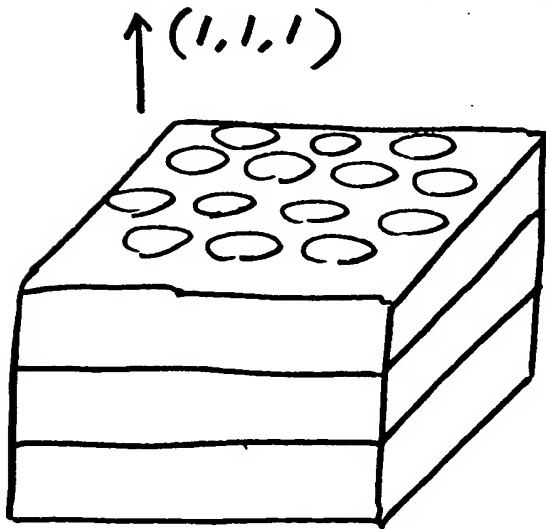
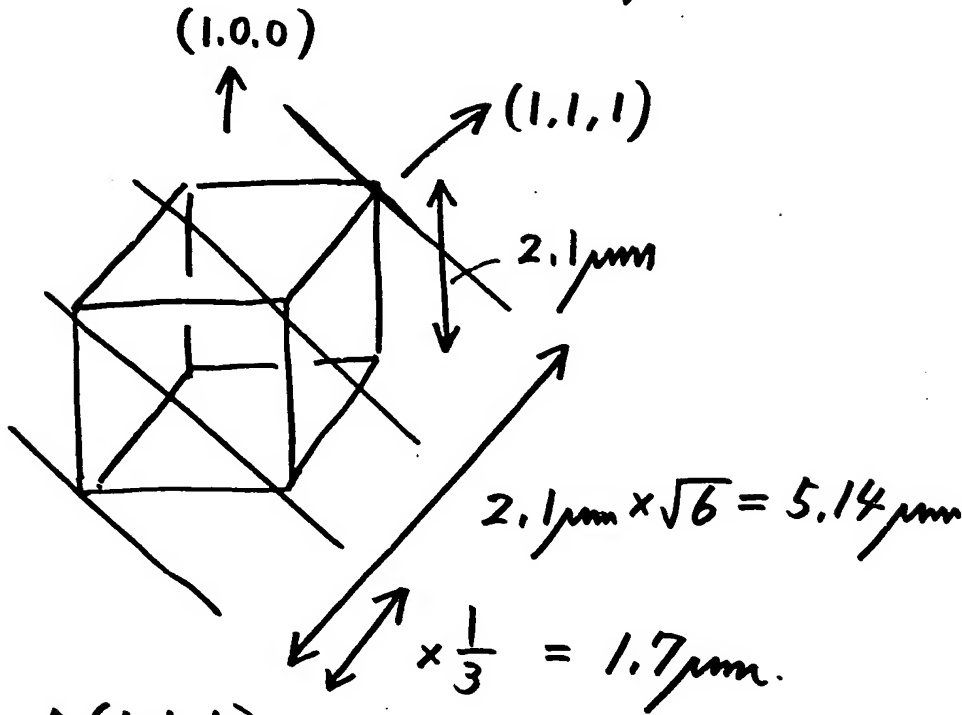
2. ヤブロノバイト (InP)

$$\lambda = 3.5 \mu\text{m} \text{ 帯}$$

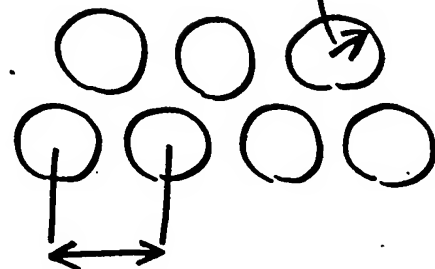
$r/a = 0.33$ を仮定.

単位格子の一边

$$3.5 \mu\text{m} \times (0.6) = 2.1 \mu\text{m}$$

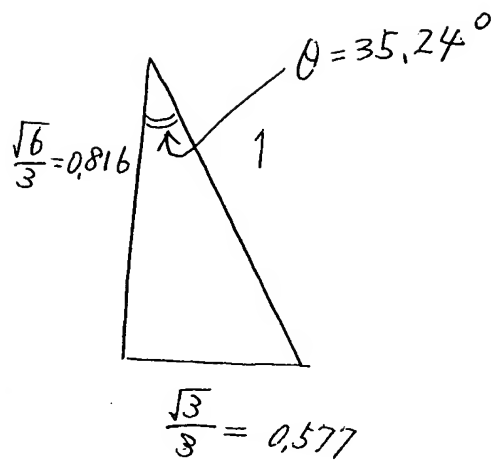
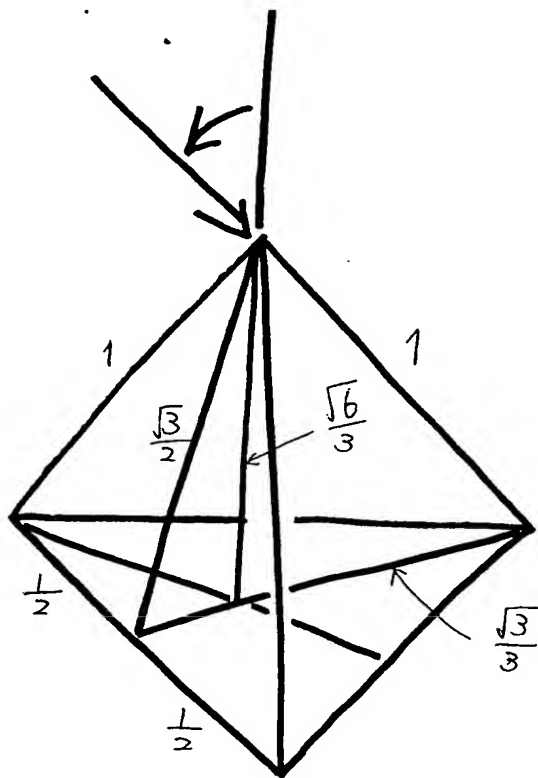


1層の厚さ
||
 $1.7 \mu\text{m}$



3個格子間かく

$$2.1 \times \frac{1}{\sqrt{2}} = 1.5 \mu\text{m}$$



Hill Band
(YR)

YR4, F \rightarrow Y1~Y3 \approx 1 並格子 = 4.
(UPP700253万) 分割 50

ヤブノバイト (Imp. 空穴)

$m = 3, 17$.

